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Notified in A.C.Is. for the week ending 28th June, 1939

Small Arms Training

Volume I, Pamphlet No. 5

Anti-Tank Rifle
1937

(Reprinted with Amendments (No. 1), 1939)

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By Command of the Army Council,

H. G. Creedy

THE WAR OFFICE,
28th June, 1939.

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GENERAL

1. The tactical employment of the anti-tank rifle is referred to in Infantry Training, 1937. Sections 6, 56, 70, 76 and 79 should be read in conjunction with this pamphlet.

The anti-tank rifle affords a means of protection against enemy light-armoured fighting vehicles. Its bullet will penetrate their armour up to about 500 yards range and inflict casualties on the crew, although it may not seriously damage the vehicle itself. A trained soldier can produce a rate of fire of about nine rounds a minute. It is essentially a weapon of surprise and will always be carried in action.

2. Its chief characteristics are :—

i. A single shot, hand-operated weapon with a simple bolt action.

ii. Great accuracy and good penetration.

iii. Comparative lightness and mobility.

iv. When fired, it has a pronounced flash and muzzle blast.

3. **General description :—**

i. Weight .. .. 36 lb.
Calibre .. .. ·55-in.
Weight of magazine containing 5 rounds 2 lb. 7 oz.
Total length .. .. 5 ft. 4 in.

ii. *Recoil.*—This is considerable, but a recoil reducer, together with a strong buffer spring and padded shoulder piece, reduces the shock of discharge on the firer's shoulder.

iii. *Mechanism.*—This is similar to that of the service rifle.

4. **Carriage.**—In the infantry the anti-tank rifle with its ammunition is carried on the platoon truck, or corresponding vehicle, until required for use. It can be man-handled by one individual for short distances; otherwise two men are required to carry it and its ammunition.

5. Training.—There are so many similarities between the anti-tank rifle and existing weapons that a trained soldier should be capable of handling it with a small amount of instruction. Training policy should, therefore, be directed to giving practice in handling and firing the weapon at moving targets.

As the rifle has a range almost double that of the S.M.L.E., it is unsafe to fire full charge ammunition on rifle ranges, except where danger areas have been extended and passed as safe.

The ·55-inch aluminium bullet has been evolved to enable practice to be carried out on classification ranges, etc., where suitable facilities and danger areas exist.

It will be found, however, that valuable practice can be carried out using a reduced scale range. This will consist of 1/5th or 1/30 scale shooting at about 100 yards on a classification range using the ·22-inch rifle attachment. The method of carrying out this training is contained in Pamphlet No. 14.

Anti-tank rifles are not specialist weapons, and all ranks will be taught to fire them. Men will be trained to aim at the places in tanks and armoured vehicles where the driver and the gunner will be, rather than at the vital parts of the machine.

The anti-tank rifle (off-side view)

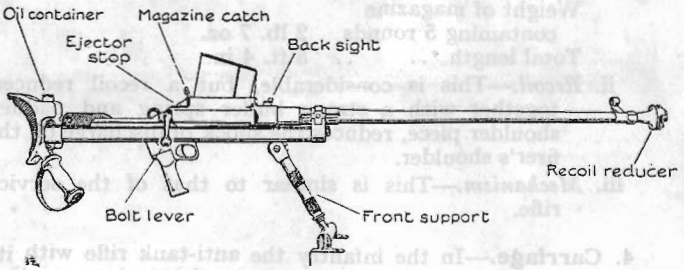

Fig. 1.

The anti-tank rifle (near-side view)

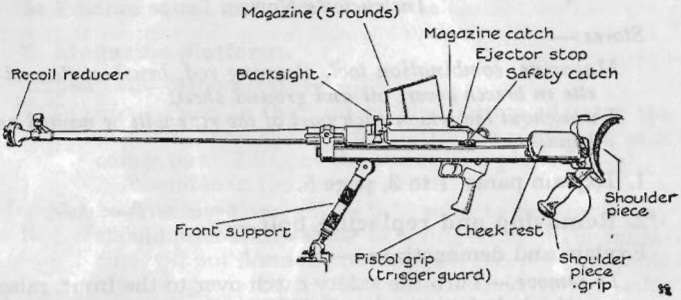

Fig. 2

The anti-tank rifle (top view)

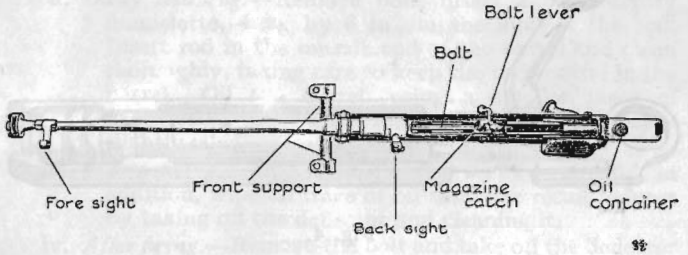

Fig. 3.

LESSON 1.—STRIPPING AND CLEANING

Instructor's Notes

Stores.—

Magazine, combination tool, cleaning rod, brushes, flannelette in breech cover, oil and ground sheet.

Throughout the lesson each part of the rifle will be named as handled.

1. Explain paras. 1 to 3, page 5.

2. Removing and replacing bolt.—

Explain and demonstrate :—

To remove.—Turn the safety catch over to the front, raise the bolt lever and pull fully to the rear, press down ejector stop and remove the bolt.

To replace.—Ensure that the ejector and extractor cover the bolt locking lugs and that the cocking piece is in line with the extractor (*i.e.* in shallow recess), and that the safety catch is forward. Insert the bolt in the bolt way, push forward, pressing down slightly on the bolt lever, and turn the bolt lever down. Press the trigger and apply the safety catch.

The bolt

Fig. 4.

3. Practise squad.

4. Recoil reducer.—

Explain and demonstrate :—

To strip.—Using the combination tool, unscrew the three deflector screws and remove the deflector.

To assemble.—Assemble in the reverse order. Care should be taken to replace the deflector on the same flanges.

5. Practise squad in 2 and 4.

6. Magazine platform.

Explain and demonstrate:—

To strip.—Press in the stud on the bottom plate of the magazine, and slide it off, controlling the spring as it comes out. Lift out the spring and platform.

Assemble in the reverse order.

Note:—The magazine will be held so as to prevent injury should premature release of spring occur. The magazine will not normally be stripped, except for cleaning after a gas attack. In peace, should it not work correctly, it will be taken to the armourer.

7. Cleaning.—

Explain and demonstrate:—

i. *Cleaning materials* are similar to those used for the service rifle, but in place of a pull-through there is a brass tubular rod with loop and wire brush, the latter for the removal of fouling. These, with flannelette and a bristle brush, are carried in the breech cover. Oil is housed in the shoulder piece. To prepare the rod for use, assemble the four sections. Pull the cord tight and secure by inserting it in the notches of the handle.

ii. *Daily cleaning.*—Remove bolt, insert a piece of dry flannelette, 4 in. by 6 in., in the loop of the rod. Insert rod in the muzzle end of the barrel and clean thoroughly, taking care to keep the rod central in the barrel. Oil the barrel, using a smaller piece of flannelette. Clean all remaining parts and leave slightly oiled.

iii. *Before firing.*—As taught for the service rifle and, in addition, wipe all trace of oil from the recoil reducer by taking off the deflector and cleaning it.

iv. *After firing.*—Remove the bolt and take off the deflector from the recoil reducer. Then, with the aid of dry flannelette, clean all loose fouling from the barrel. Next, scour out the barrel with an oily brush, and clean with dry flannelette. Clean the breech with the bristle brush.

Clean and oil the deflector and the body of the recoil reducer.

All remaining parts will be cleaned as in daily cleaning.

The outside of the magazine and magazine platform will be wiped and oiled, but not stripped. Finally oil the barrel, using flannelette. Replace the deflector and bolt.

v. *During and after gas attack.*—As for the service rifle. Question squad on this method.

vi. *Breech cover.*—Removing and replacing.

LESSON 2.—LOADING, UNLOADING, SIGHT-SETTING AND AIMING

Instructor's Notes

Stores.—

Magazines, dummies and ground sheets.

1. Filling magazines.—

Explain and demonstrate :—

i. *The magazine.*—Holds five rounds. Inside is a platform and powerful spring.

ii. *To fill.*—Hold the magazine in one hand, resting it on the knee or on a solid surface. Press down the platform and insert the base of the cartridge under the magazine lips. Push the cartridge into the magazine. Continue this action until the magazine is filled.

iii. *To empty.*—Push each round forward with the nose of a bullet and remove.

2. Practise squad.

3. Loading and unloading.—

Explain and demonstrate :—

i. *Loading position.*—Lie down with the body straight behind the rifle ; grasp the pistol grip with the right hand, forefinger outside the trigger guard and the left hand on the shoulder piece grip.

ii. *To load.*—Turn the safety catch over to the front, put the magazine on, forward portion first. Open and close the breech as taught with the service rifle, taking care to turn the bolt lever completely down. Apply the safety catch.

iii. *To unload.* Turn the safety catch over to the front; press the magazine catch with the palm of the hand and remove the magazine. Open and close the breech. Raise the shoulder piece into the shoulder and press the trigger. Apply the safety catch, lower the rifle and stand up.

4. Practise squad.

5. Sight setting.—

Explain that the body of the backsight is marked on the left " 300 ", and on the right " 500 ".

To set the backsight.

For 300 yards turn the lever to the left.

For 500 yards turn the lever to the right. The aperture is thus raised or lowered to the required height.

6. **Aiming.—**

Explain that the method of aiming is the same as employed with the light machine gun (Instructor illustrates by diagram). Question squad on rules of aiming with the light machine gun.

Correct aim showing 1 width lead at a crossing tank

Range 300 yds.—Tank 11 ft. long.

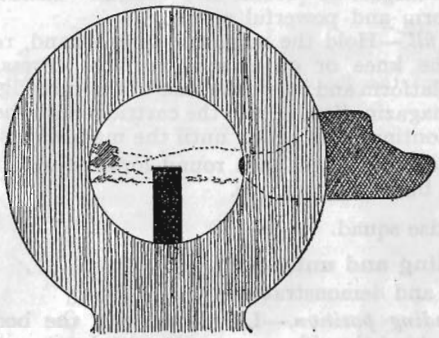

FIG. 5.

Range 500 yds.—Tank 11 ft. long.

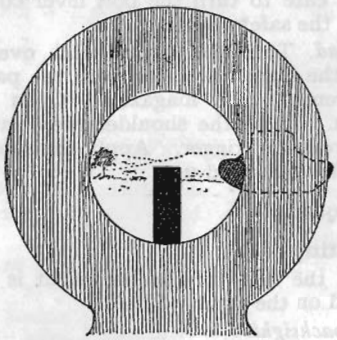

FIG. 5A.

LESSON 3.—HOLDING AND FIRING

Instructor's Notes

Stores.—

Magazines and dummies.
A.F.V. targets and ground sheets.

1. Explain that the trigger has two pressures, which will be taken in the same way as with the service rifle.

2. Holding.—

Explain and demonstrate :—

i. Adopt the loading position and load. Adjust sights. Turn the safety catch over to the front. Raise the shoulder piece into the shoulder, lower the cheek on to the cheek rest and take the first pressure. Hold firmly with both hands and aim as taught. Explain that it may be necessary to adjust the elevation of the barrel and that this is done by rotating the sleeve on the front support.

ii. *Firing.*—The method of firing is similar to that of the service rifle. Having fired, reload at once in the shoulder, and declare the point of aim.

3. Practise squad.

4. Changing magazines.—

Explain and demonstrate that, when necessary, the firer will change magazines with the rifle in the shoulder. The bolt will not go forward when the magazine is empty. It must, therefore, be fully withdrawn before a new magazine is placed on the rifle.

5. Practise squad.

6. Moving targets.—

i. Explain that the method of engaging moving targets is the same as taught with the rifle. Question squad on this method and emphasize that the swing of the rifle must not be checked at the moment of pressing the trigger.

ii. The following are guides in firing at armoured fighting vehicles :—

(*a*) When moving directly across the front, aim one width from the centre of the target (*see* Fig. 6).

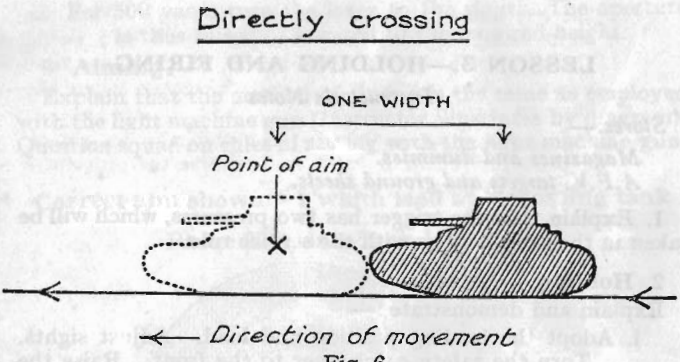

Fig. 6.

(*b*) When moving diagonally across the front, *i.e.* closing in on your position, less "lead" is required and aim should be taken at the front edge (*see* Fig. 7).

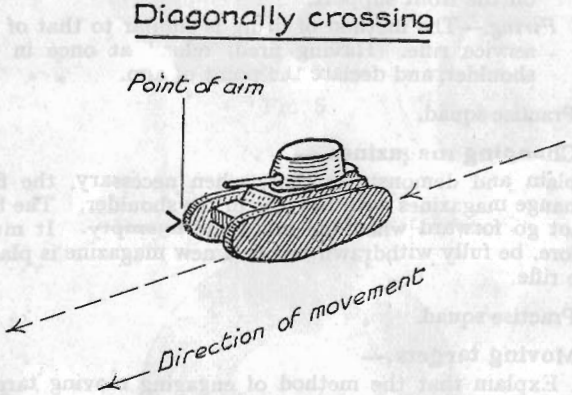

Fig. 7.

(*c*) When approaching or retiring, aim straight at them.

7. To set up the rifle.—

i. *To prepare the front support for use.*—With the shoulder piece on the ground, hold the barrel with

the left hand in any convenient manner. With the right hand depress the retaining catch and swing the support away from the barrel, at the same time releasing the catch, which will re-engage when the support is fully extended.

ii. *To close the front support.*—Hold the rifle as above, depress the retaining catch and reverse the procedure detailed in para. i, above.

8. Practise squad.

LESSON 4.—HANDLING

Instructor's Notes

Stores.—

Magazines.

This lesson should be carried out on ground where various types of cover exist.

1. Explain that the anti-tank rifle is carried within the platoon or corresponding sub-unit for the purpose of protection against attack by armoured fighting vehicles and that the following factors require consideration when siting for position :—

i. The position of neighbouring troops.

ii. A good field of fire, if possible not less than 500 yards.

iii. The necessity for obtaining surprise, which can only be achieved by careful concealment.

iv. Ground which is wooded or marshy, streams which have steep sides, rocky beds and a good depth of water, form an obstacle to the movement of armoured fighting vehicles and serve to shepherd these into the more open country, which should, therefore, be covered by anti-tank fire.

v. The location of anti-tank mine-fields.

2. **Ammunition.**—The ammunition will be carried as follows :—

i. In the truck or corresponding vehicle—200 rounds for each anti-tank rifle. Of these, 160 rounds are in 16 bandoliers, each holding 2 clips of five rounds, and 40 rounds in eight magazines.

ii. In reserve, 40 rounds for each anti-tank rifle.

3. **Use of cover.—**

i. Explain :—

(*a*) That the firer should at all times make full use of cover for protection and concealment. His knowledge of firing the light machine gun from behind cover should be applied to the mounting and firing of the anti-tank rifle. Special attention must be given to the concealment of the muzzle on account of the flash and muzzle blast.

(*b*) That the position should always be examined from the point of view of the enemy. Normally, when an anti-tank rifleman has been given the arc or approaches for which he is responsible

and the approximate position from which he will fire, he should leave the rifle in the best cover and reconnoitre alternative positions for it. He should decide how it is to be mounted at each place, bearing in mind that free use of the weapon is a factor of primary importance. Unless concealment is complete, both from air and ground, the rifle should be kept under cover near at hand, and mounted only when the necessity arises.

(*c*) That the anti-tank rifle is not easy to swing across a wide arc when being fired in the lying position. A position should therefore be chosen, when possible, from which it can be fired either sitting or standing, but no support behind the shoulder should be given owing to the shock of discharge. In the early stages this will mean placing behind natural cover, which allows the firer to sit. At the earliest opportunity a weapon pit should be dug, and later a trench from which the weapon can be fired. In an emergency the anti-tank rifle may have to be fired from the lying position.

(*d*) That on all ranges where anti-tank rifle practice (both 1/5th scale and full charge) is carried out weapon pits should be constructed. These emplacements should be made so as to provide a firm base for the front support and so that the firer can adopt either the sitting or standing position and cover the required arc of fire.

ii. Explain and demonstrate setting up the rifle, using various types of cover, with and without the front support, and introduce camouflage where necessary.

4. Practise squad.

TESTS OF ELEMENTARY TRAINING

(1)	(2)	(3)	(4)
Name of test and stores requires	Conditions before test	Time	Remarks
No. 1—Magazine filling. Magazines and dummy cartridges.	Magazine empty. Dummy cartridges in clips. Position—any service position.	15 secs. from the word "Go" until magazine is filled.	The man will be required to carry out this test 3 times correctly out of 4 attempts.
No. 2—Aiming and firing.	As for Practice 2, Part I, A.Tk. Rifle Course (*see* Pamphlet No 14).	Nil.	4 shots out of the 6 must be in the scoring area of the target.

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